

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-87 (canceled)

*chemical modification
similar in structure*

Claim 88 (new): An antigenic composition comprising an antigen and an effective adjuvanting amount of the combination of: (1) 3-O-deacylated monophosphoryl lipid A (MPL) or monophosphoryl lipid A and derivatives and analogs thereof, and (2) a cytokine or lymphokine, ~~or an agonist or antagonist to said cytokine or lymphokine~~, wherein the combination of adjuvants enhances the immune response in a vertebrate host to said antigen.

Claim 89 (new): The antigenic composition of claim 88, where the selected antigen is a polypeptide, peptide or fragment derived from a protein.

Claim 90 (new): The antigenic composition of claim 88, where 3-O-deacylated monophosphoryl lipid A is used in the form of a stable oil-in-water emulsion.

Claim 91 (new): The antigenic composition of claim 88, where the cytokine or lymphokine is selected from the group consisting of granulocyte macrophage colony stimulating factor and interleukin-12.

Claim 92 (new): The antigenic composition of claim 91, where the cytokine or lymphokine is granulocyte macrophage colony stimulating factor.

Claim 93 (new): The antigenic composition of claim 92, where 3-O-deacylated monophosphoryl lipid A is used in the form of a stable oil-in-water emulsion.

~~Claim 94 (new):~~ The antigenic composition of claim 91, where the cytokine or lymphokine is interleukin-12.

~~Claim 95 (new):~~ The antigenic composition of claim 94, where 3-O-deacylated monophosphoryl lipid A is used in the form of a stable oil-in-water emulsion.

Claim 96 (new): The antigenic composition of claim 88, which further comprises a diluent or carrier.

Claim 97 (new): The antigenic composition of claim 96, where 3-O-deacylated monophosphoryl lipid A is used in the form of a stable oil-in-water emulsion.

Claim 98 (new): The antigenic composition of claim 88, where the antigen is derived from a pathogenic virus.

Claim 99 (new): The antigenic composition of claim 88, where the antigen is derived from a pathogenic bacterium.

Claim 100 (new): The antigenic composition of claim 88, where the antigen is derived from a pathogenic fungus.

Claim 101 (new): The antigenic composition of claim 88, where the antigen is derived from a pathogenic parasite.

Claim 102 (new): The antigenic composition of claim 88, where the antigen is derived from a cancer cell or tumor cell.

Claim 103 (new): The antigenic composition of claim 88, where the antigen is derived from an allergen.

Claim 104 (new): The antigenic composition of claim 88, where the antigen is derived from A β protein or peptide thereof, or an antibody thereto.

Claim 105 (new): A method for increasing the ability of an antigenic composition containing a selected antigen from a pathogenic virus to elicit the immune response of a vertebrate host, which comprises administering to said host an antigenic composition of claim 98.

Claim 106 (new): A method for increasing the ability of an antigenic composition containing a selected antigen from a pathogenic bacterium to elicit the immune response of a vertebrate host, which comprises administering to said host an antigenic composition of claim 99.

Claim 107 (new): A method for increasing the ability of an antigenic composition containing a selected antigen from a pathogenic fungus to elicit the immune response of a vertebrate host, which comprises administering to said host an antigenic composition of claim 100.

Claim 108 (new): A method for increasing the ability of an antigenic composition containing a selected antigen from a pathogenic parasite to elicit the immune response of a vertebrate host, which comprises administering to said host an antigenic composition of claim 101.

Claim 109 (new): A method for increasing the ability of an antigenic composition containing a selected antigen from a pathogenic virus to elicit cytotoxic T lymphocytes in a vertebrate host, which comprises administering to said host an antigenic composition of claim 98.

Claim 110 (new): A method for increasing the ability of an antigenic composition containing a selected antigen from a pathogenic bacterium to elicit cytotoxic T lymphocytes in a vertebrate host, which comprises administering to said host an antigenic composition of claim 99.

Claim 111 (new): A method for increasing the ability of an antigenic composition containing a selected antigen from a pathogenic fungus to elicit cytotoxic T lymphocytes in a vertebrate host, which comprises administering to said host an antigenic composition of claim 100.

Claim 112 (new): A method for increasing the ability of an antigenic composition containing a selected antigen from a pathogenic parasite to elicit cytotoxic T lymphocytes in a vertebrate host, which comprises administering to said host an antigenic composition of claim 101.

Claim 113 (new): A method for increasing the ability of an antigenic composition containing a selected cancer antigen or tumor-associated antigen from a cancer cell or tumor cell to elicit a therapeutic or prophylactic anti-cancer effect in a vertebrate host, which comprises administering to said host an antigenic composition of claim 102.

Claim 114 (new): A method for increasing the ability of an antigenic composition containing a selected allergen to moderate an allergic response in a vertebrate host, which comprises administering to said host an antigenic composition of claim 103.

A₂M₃C₂S

P.A.
A₂S
A₂M₃C₂D
C₂M₃
A₂S
A₂M₃C₂D
A₂M₃C₂S
A₂M₃C₂D
A₂M₃C₂S

Claim 116 (new): A method for increasing the ability of an antigenic composition to prevent or treat disease characterized by amyloid deposition in a vertebrate host, which comprises administering to said host an antigenic composition of claim 104.

Claim 116 (new): The antigenic composition of claim 98, where the selected antigen is from human immunodeficiency virus (HIV).

Claim 117 (new): The antigenic composition of claim 116, where the selected HIV antigen is an HIV protein, polypeptide, peptide or fragment derived from said protein.

Claim 118 (new): The antigenic composition of Claim 117 where the selected antigens are the HIV peptides having the amino acid sequence:

~~Lys Gln Ile Ile Asn Met Trp Gln Glu Val Gly Lys Ala Met Tyr Ala Cys Thr Arg Pro Asn
Tyr Asn Lys Arg Lys Arg Ile His Ile Gly Pro Gly Arg Ala Phe Tyr Thr Thr Lys (SEQ ID
NO:1), or~~

Lys Gln Ile Ile Asn Met Trp Gln Glu Val Gly Lys Ala Met Tyr Ala Cys Thr Arg Pro Asn
Tyr Asn Lys Arg Lys Arg Ile His Ile Gly Pro Gly Arg Ala Phe Tyr Thr Thr Lys (SEQ ID
NO:2).

Claim 119 (new): The antigenic composition of claim 116, where 3-O-deacylated monophosphoryl lipid A is used in the form of a stable oil-in-water emulsion.

Claim 120 (new): The antigenic composition of claim 116, where the cytokine or lymphokine is selected from the group consisting of granulocyte macrophage colony stimulating factor and interleukin-12.

Claim 121 (new): The antigenic composition of claim 120, where the cytokine or lymphokine is granulocyte macrophage colony stimulating factor.

Claim 122 (new): The antigenic composition of claim 121, where 3-O-deacylated monophosphoryl lipid A is used in the form of a stable oil-in-water emulsion.

Claim 123 (new): The antigenic composition of claim 120, where the cytokine or lymphokine is interleukin-12.

Claim 124 (new): The antigenic composition of claim 123, where 3-O-deacylated monophosphoryl lipid A is used in the form of a stable oil-in-water emulsion.

Claim 125 (new): The antigenic composition of claim 116, which further comprises a diluent or carrier.

Claim 126 (new): The antigenic composition of claim 125, where 3-O-deacylated monophosphoryl lipid A is used in the form of a stable oil-in-water emulsion.

~~Claim 127 (new):~~ The antigenic composition of claim 98, where the selected antigen is from simian immunodeficiency virus (SIV).

~~Claim 128 (new):~~ The antigenic composition of claim 127, where the selected SIV antigen is an SIV protein, polypeptide, peptide or fragment derived from said protein.

Claim 129 (new): The antigenic composition of claim 128, where the selected antigen is an SIV peptide selected from the peptides consisting of the amino acid sequences: Cys Thr Pro Tyr Asp Ile Asn Gln Met (SEQ ID NO:3), Ser Thr Pro Pro Leu Val Arg Leu Val (SEQ ID NO:4), Tyr Ala Pro Pro Ile Ser Gly Gln Ile (SEQ ID NO:5), Glu Leu Tyr Lys Tyr Lys Val Val Lys Ile Glu Pro Leu Gly Val Ala Pro Thr Lys Ala Cys Thr Pro Tyr Asp Ile Asn Gln Met (SEQ ID NO:7), Glu Leu Tyr Lys Tyr Lys Val Val Lys Ile Glu Pro Leu Gly Val Ala Pro Thr Lys Ala Ser Thr Pro Pro Leu Val Arg Leu Val (SEQ ID NO:8) and Glu Leu Tyr Lys Tyr Lys Val Val Lys Ile Glu Pro Leu Gly Val Ala Pro Thr Lys Ala Tyr Ala Pro Pro Ile Ser Gly Gln Ile (SEQ ID NO:9).

~~Claim 130 (new):~~ The antigenic composition of claim 127, where 3-O-deacylated monophosphoryl lipid A is used in the form of a stable oil-in-water emulsion.

~~Claim 131 (new):~~ The antigenic composition of claim 127, where the cytokine or lymphokine is selected from the group consisting of granulocyte macrophage colony stimulating factor and interleukin-12.

~~Claim 132 (new):~~ The antigenic composition of claim 131, where the cytokine or lymphokine is granulocyte macrophage colony stimulating factor.

Claim 133 (new): The antigenic composition of claim 132, where 3-O-deacylated monophosphoryl lipid A is used in the form of a stable oil-in-water emulsion.

~~Claim 134 (new):~~ The antigenic composition of claim 131, where the cytokine or lymphokine is interleukin-12.

Claim 135 (new): The antigenic composition of claim 134, where 3-O-deacylated monophosphoryl lipid A is used in the form of a stable oil-in-water emulsion.

Claim 136 (new): The antigenic composition of claim 127, which further comprises a diluent or carrier.

Claim 137 (new): The antigenic composition of claim 132, where 3-O-deacylated monophosphoryl lipid A is used in the form of a stable oil-in-water emulsion.

Claim 138 (new): The antigenic composition of claim 99, where the selected antigen is from *Neisseria gonorrhoeae*.

Claim 139 (new): The antigenic composition of claim 138, where the selected *Neisseria gonorrhoeae* antigen is a *Neisseria gonorrhoeae* protein, polypeptide, peptide or fragment derived from said protein.

Claim 140 (new): The antigenic composition of claim 139, where the selected antigen is the *Neisseria gonorrhoeae* Porin B protein.

Claim 141 (new): The antigenic composition of claim 138, where 3-O-deacylated monophosphoryl lipid A is used in the form of a stable oil-in-water emulsion.

Claim 142 (new): The antigenic composition of claim 138, where the cytokine or lymphokine is selected from the group consisting of granulocyte macrophage colony stimulating factor and interleukin-12.

Claim 143 (new): The antigenic composition of claim 142, where the cytokine or lymphokine is granulocyte macrophage colony stimulating factor.

Claim 144 (new): The antigenic composition of claim 143, where 3-O-deacylated monophosphoryl lipid A is used in the form of a stable oil-in-water emulsion.

Claim 145 (new): The antigenic composition of claim 142, where the cytokine or lymphokine is interleukin-12.

Claim 146 (new): The antigenic composition of claim 145, where 3-O-deacylated monophosphoryl lipid A is used in the form of a stable oil-in-water emulsion.

Claim 147 (new): The antigenic composition of claim 138, which further comprises a diluent or carrier.

Claim 148 (new): The antigenic composition of claim 143, where 3-O-deacylated monophosphoryl lipid A is used in the form of a stable oil-in-water emulsion.

Claim 149 (new): The antigenic composition of claim 98, where the selected antigen is from human Respiratory syncytial virus (RSV).

Claim 150 (new): The antigenic composition of claim 149, where the selected RSV antigen is an RSV protein, polypeptide, peptide or fragment derived from said protein.

Claim 151 (new): The antigenic composition of claim 150, where the selected antigen is the RSV fusion (F) protein.

Claim 152 (new): The antigenic composition of claim 149, where 3-O-deacylated monophosphoryl lipid A is used in the form of a stable oil-in-water emulsion.

Claim 153 (new): The antigenic composition of claim 149, where the cytokine or lymphokine is selected from the group consisting of granulocyte macrophage colony stimulating factor and interleukin-12.

Claim 154 (new): The antigenic composition of claim 153, where the cytokine or lymphokine is granulocyte macrophage colony stimulating factor.

Claim 155 (new): The antigenic composition of claim 154, where 3-O-deacylated monophosphoryl lipid A is used in the form of a stable oil-in-water emulsion.

Claim 156 (new): The antigenic composition of claim 153, where the cytokine or lymphokine is interleukin-12.

Claim 157 (new): The antigenic composition of claim 156, where 3-O-deacylated monophosphoryl lipid A is used in the form of a stable oil-in-water emulsion.

Claim 158 (new): The antigenic composition of claim 149, which further comprises a diluent or carrier.

Claim 159 (new): The antigenic composition of claim 158, where 3-O-deacylated monophosphoryl lipid A is used in the form of a stable oil-in-water emulsion.

Claim 160 (new): A method for increasing the ability of an antigenic composition containing an HIV antigen to elicit the immune response of a vertebrate host, which comprises administering to said host an antigenic composition of claim 116.

Claim 161 (new): A method for increasing the ability of an antigenic composition containing an HIV antigen to elicit the immune response of a vertebrate host, which comprises administering to said host an antigenic composition of claim 125.

Claim 162 (new): The method of claim 161, where the HIV antigen is the HIV peptide having the amino acid sequence:

Lys Gln Ile Ile Asn Met Trp Gln Glu Val Gly Lys Ala Met Tyr Ala Cys Thr Arg Pro Asn Tyr Asn Lys Arg Lys Arg Ile His Ile Gly Pro Gly Arg Ala Phe Tyr Thr Thr Lys (SEQ ID NO:1).

Claim 163 (new): The method of claim 161, where the HIV antigen is the HIV peptide having the amino acid sequence:

Lys Gln Ile Ile Asn Met Trp Gln Glu Val Gly Lys Ala Met Tyr Ala Thr Arg Pro Asn Tyr Asn Lys Arg Lys Arg Ile His Ile Gly Pro Gly Arg Ala Phe Tyr Thr Thr Lys (SEQ ID NO:2).

For what purpose?
Claim 164 (new): A method for increasing the ability of an antigenic composition containing an HIV antigen to elicit cytotoxic T lymphocytes in a vertebrate host, which comprises administering to said host an antigenic composition of claim 116.

Claim 165 (new): A method for increasing the ability of an antigenic composition containing an HIV antigen to elicit cytotoxic T lymphocytes in a vertebrate host, which comprises administering to said host an antigenic composition of claim 125.

Claim 166 (new): The method of claim 165, where the HIV antigen is the HIV peptide having the amino acid sequence:

Lys Gln Ile Ile Asn Met Trp Gln Glu Val Gly Lys Ala Met Tyr Ala Cys Thr Arg Pro Asn Tyr Asn Lys Arg Lys Arg Ile His Ile Gly Pro Gly Arg Ala Phe Tyr Thr Thr Lys (SEQ ID NO:1).

Claim 167 (new): The method of claim 165, where the HIV antigen is the HIV peptide having the amino acid sequence: *S452 AND 2*

Lys Gln Ile Ile Asn Met Trp Gln Glu Val Gly Lys Ala Met Tyr Ala Thr Arg Pro Asn Tyr Asn Lys Arg Lys Arg Ile His Ile Gly Pro Gly Arg Ala Phe Tyr Thr Thr Lys (SEQ ID NO:2).

~~Claim 168 (new):~~ A method for increasing the ability of an antigenic composition containing an SIV antigen to elicit the immune response of a vertebrate host, which comprises administering to said host an antigenic composition of claim 127.

~~Claim 169 (new):~~ A method for increasing the ability of an antigenic composition containing an SIV antigen to elicit the immune response of a vertebrate host, which comprises administering to said host an antigenic composition of claim 136.

~~Claim 170 (new):~~ The method of claim 169, where the SIV antigen is an SIV peptide selected from the peptides consisting of the amino acid sequences: Cys Thr Pro Tyr Asp Ile Asn Gln Met (SEQ ID NO:3), Ser Thr Pro Pro Leu Val Arg Leu Val (SEQ ID NO:4), Tyr Ala Pro Pro Ile Ser Gly Gln Ile (SEQ ID NO:5), Glu Leu Tyr Lys Tyr Lys Val Val Lys Ile Glu Pro Leu Gly Val Ala Pro Thr Lys Ala Cys Thr Pro Tyr Asp Ile Asn Gln Met (SEQ ID NO:7), Glu Leu Tyr Lys Tyr Lys Val Val Lys Ile Glu Pro Leu Gly Val Ala Pro Thr Lys Ala Ser Thr Pro Pro Leu Val Arg Leu Val (SEQ ID NO:8) and Glu Leu Tyr Lys Tyr Lys Val Val Lys Ile Glu Pro Leu Gly Val Ala Pro Thr Lys Ala Tyr Ala Pro Pro Ile Ser Gly Gln Ile (SEQ ID NO:9).

~~Claim 171 (new):~~ A method for increasing the ability of an antigenic composition containing an SIV antigen to elicit cytotoxic T lymphocytes in a vertebrate host, which comprises administering to said host an antigenic composition of claim 127.

~~Claim 172 (new):~~ A method for increasing the ability of an antigenic composition containing an SIV antigen to elicit cytotoxic T lymphocytes in a vertebrate host, which comprises administering to said host an antigenic composition of claim 136.

~~Claim 173 (new):~~ The method of claim 172, where the SIV antigen is an SIV peptide selected from the peptides consisting of the amino acid sequences: Cys Thr Pro Tyr Asp Ile Asn Gln Met (SEQ ID NO:3), Ser Thr Pro Pro Leu Val Arg Leu Val (SEQ ID NO:4), Tyr Ala Pro Pro Ile Ser Gly Gln Ile (SEQ ID NO:5), Glu Leu Tyr Lys Tyr Lys Val Val Lys Ile Glu Pro Leu Gly Val Ala Pro Thr Lys Ala Cys Thr Pro Tyr Asp Ile Asn Gln Met (SEQ ID NO:7), Glu Leu Tyr Lys Tyr Lys Val Val Lys Ile Glu Pro Leu Gly Val Ala Pro Thr Lys Ala Ser Thr Pro Pro Leu Val Arg Leu Val (SEQ ID NO:8) and Glu Leu Tyr Lys Tyr Lys Val Val Lys Ile Glu Pro Leu Gly Val Ala Pro Thr Lys Ala Tyr Ala Pro Pro Ile Ser Gly Gln Ile (SEQ ID NO:9).

Claim 174 (new): A method for increasing the ability of an antigenic composition containing a *Neisseria gonorrhoeae* antigen to elicit the immune response of a vertebrate host, which comprises administering to said host an antigenic composition of claim 138.

Claim 175 (new): A method for increasing the ability of an antigenic composition containing a *Neisseria gonorrhoeae* antigen to elicit the immune response of a vertebrate host, which comprises administering to said host an antigenic composition of claim 147.

Claim 176 (new): The method of claim 175, where the *Neisseria gonorrhoeae* antigen is the *Neisseria gonorrhoeae* Porin B protein.

Claim 177 (new): A method for increasing the ability of an antigenic composition containing a *Neisseria gonorrhoeae* antigen to elicit cytotoxic T lymphocytes in a vertebrate host, which comprises administering to said host an antigenic composition of claim 138.

Claim 178 (new): A method for increasing the ability of an antigenic composition containing a *Neisseria gonorrhoeae* antigen to elicit cytotoxic T lymphocytes in a vertebrate host, which comprises administering to said host an antigenic composition of claim 147.

Claim 179 (new): The method of claim 178, where the *Neisseria gonorrhoeae* antigen is the *Neisseria gonorrhoeae* Porin B protein.

Claim 180 (new): A method for increasing the ability of an antigenic composition containing a human Respiratory syncytial virus (RSV) antigen to elicit the immune response of a vertebrate host, which comprises administering to said host an antigenic composition of claim 149.

Claim 181 (new): A method for increasing the ability of an antigenic composition containing an RSV antigen to elicit the immune response of a vertebrate host, which comprises administering to said host an antigenic composition of claim 158.

Claim 182 (new): The method of claim 181, where the RSV antigen is the RSV fusion (F) protein.

Claim 183 (new): A method for increasing the ability of an antigenic composition containing an RSV antigen to elicit cytotoxic T lymphocytes in a vertebrate host, which comprises administering to said host an antigenic composition of claim 149.

Claim 184 (new): A method for increasing the ability of an antigenic composition containing an RSV antigen to elicit cytotoxic T lymphocytes in a vertebrate host, which comprises administering to said host an antigenic composition of claim 158.

Claim 185 (new): The method of claim 184, where the RSV antigen is the RSV fusion (F) protein.